

ABSTRACT OF THE DISCLOSURE

An electrode device for an electric field emission electron source suitable for duty drive having an element size of 50  $\mu\text{m}$  or smaller and an electrode device fabricating method. A glass film used as catalyst of forming carbon nanotubes is formed on a substrate to form metal catalyst at nano meter level and control dispersion. Carbon nanotubes are dispersively formed on the metal catalyst and a metal coat is formed on the surface of carbon nanotubes to improve electric pulse response characteristics.